



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,300	03/31/2004	Lance T. Funston	(192654)	7296
7590	07/21/2009		EXAMINER	
GREGORY J. LAVORGNA			MARANDI, JAMES R	
DRINKER BIDDLE & REATH LLP				
One Logan Square		ART UNIT	PAPER NUMBER	
18th & Cherry Streets				2421
Philadelphia, PA 19103-6996				
		MAIL DATE	DELIVERY MODE	
		07/21/2009	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/815,300	FUNSTON, LANCE T.	
	Examiner	Art Unit	
	JAMES R. MARANDI	2421	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 24 June 2009.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-7 and 9-11 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-7 and 9-11 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) Notice of Informal Patent Application

6) Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/24/09 has been entered.

Response to Amendment

2. This action is in response to applicant's amendment filed on 6/24/09. Claims 1-7, and 9-11 are presently pending. Claim 8 has been canceled.

Response to Arguments

3. Applicant's arguments filed on 6/24/09, with regards to claims 1-7, and 9-11 have been fully considered but they are not persuasive.

3.1. Applicant contends that “***claims 1-7 and 9-11 are believed to recite sufficient transformation to meet the requirements of Section 101 and the In re Bilski decision***”. Page 7 of Remarks, 4th paragraph

Examiner disagrees. Claims 1-7 and 9-11 recite series of data structures, and calculations on numbers, which as recited, are broad enough that the claims could be completely performed mentally, verbally, or without a machine nor is any transformation apparent. Such exercises are not salutatory. It is lack of real world data, no physical or tangible objects (e.g. from In Re Bilski in reference to Abele - physical and tangible objects, namely the structure of bones, organs and other body tissues) claimed and there is no transformation that is central to the purpose of the claimed process.

For example; applicant states that “***Independent claim 1 recites “national equivalent units using a database” (Preamble), and such data is “related to local delivery of television commercial spot” which is a tangible object.***”

Page 8 of Remarks, 2nd paragraph

Examiner disagrees. “National Equivalent unit” is a number, and a “database”, as recited, is a non-functional descriptive material. Even though a relationship may exist between the two, in one’s mind, there is clearly a lack of physical embodiment, through a machine/ computer to make such claim statutory as per Bilski.

3.2. Applicant further states that “***claim 1 recites a process that transforms specific data using a database into national equivalent units, and this data represents tangible objects in compliance with Section 101 and the In re Bilski decision.***”

Page 8 of Remarks, last two lines of 2nd paragraph

Examiner presents that said numbers as presented are “functional descriptive material” at best, and per MPEP 2106.01 are non-statutory. A database can not be construed as being fully functional operable system such as a DB2 or Oracle system. A phone book is a database. One can look up published Nielsen rating books, select a few numbers and mentally arrive at the numbers the applicant claims as tangible. Such calculations are not statutory.

Same applies to applicant’s rational for claims 2 and 3. Applicant is advised to refer to the May 15, 2008 memorandum issued by Deputy Commissioner for Patent Examining Policy, John J. Love, titled “Clarification of ‘Processes’ under 35 U.S.C. 101”

3.3. Applicant further argues that ***“the MediaMath reference (which references Nielsen Media Research) is not understood to disclose the formation of "national equivalent units" related to local commercial advertising spots. While the MediaMath reference has a number of different calculations, none are understood to relate to "national equivalent units" or local commercial advertising spots as recited in independent claims 1, 2 and 3.”*** Page 10 of Remarks, 1st paragraph

Applicant’s “National Equivalent Units” is a linear extrapolation of local spot impressions. Applicant arrives at this calculation the same way Nielsen aggregates impressions for a particular advertisement or program over a period of time, or a population of viewers. See Nielsen’s GRP or IMP calculations.

3.4. Applicant further argues that ***Second, as to the alleged admitted prior art, the Applicant respectfully re-iterates its traversal of the Examiner's characterization of the statements made in paragraphs [0025] and [0028] of the "Detailed Description of the Invention" as "admitted prior art." While these paragraphs acknowledge the availability of electronic affidavits and Nielsen's CMIT database, it is respectfully pointed out that the manner in which embodiments of the invention use these electronic affidavits and CMIT databases -in combination***

with the other operations recited in the independent claims -is novel and unique.

Page 10 of Remarks, 2nd Paragraph

Examiner points out that in addressing specific limitations of several claims relating to the availability of electronic affidavits and Nielsen's CMIT database. Examiner has relied on those admissions by applicant to reject any limitations that may have been perceived to be applicant's own invention, such as limitations of claims 2,3, 5, and 9 (where stated ***obtaining, in electronic format, details on the airing of the local spots*** -electronic affidavits-, and ***obtaining national viewing data for the network*** -CMIT-). Paragraphs [25] and [28] are admissions of the state of the art by the applicant, and are used to only meet limitations recited in claim.

3.5. Applicant argues that "***Whymark patent cited by the Examiner, this patent does not relate to forming "national equivalent units"***" Page 10 of Remarks, 3rd Paragraph

Examiner agrees. However, Whymark was presented to show a desire and motivation by the industry to accurately measure and price advertising rates, times, and audience impressions (Whymark, Col. 3, lines 16-25). This motivation is in line with applicant's stated motivation in applicant's specification ¶ [8].

3.6. Applicant further argues that "*Further, while the Examiner asserts that it would be allegedly obvious "to automate the scoring and iterating steps" (Office Action, page 10), this is respectfully traversed. Prior to the present invention, it is believed that there was no manual or automated system to map or link zone penetration against net universe and to apportion against Nielsen national ratings.*" Page 12 of Remarks, 3rd paragraph

Examiner disagrees. Glen Szczypka et al. in "The Adaptation and Use of Nielsen Media Research Commercial Rating Data" study, published in 2003 uses demographics, along with Nielsen data to arrive at the viewing/ distribution impact of smoking advertising. In particular in Page 18, 2nd paragraph, he discloses allocating National Cable ratings to local DMA markets, and further elaborates on the aggregation process in page 19. See pages 12-20.

3.7. Applicant argues that "*Regarding independent claim 2, this claim recites in part "obtaining national viewing data for the network in increments of less than one hour corresponding to each time the local spot aired and uploading said data into said database." The Examiner alleges that Nielsen's CMIT discloses this operation. This is respectfully traversed. CMIT is understood to only track clearings by time zone to measure aggregated delivery of syndicated programming, and CMIT does not track zone insertion*" Page 12 of Remarks, 4th paragraph

Examiner disagrees. Claim 2 recites **obtaining national viewing data for the network in increments of less than one hour corresponding to each time the local spot aired and uploading said data into said database** (Nielsen's CMIT, as admitted in ¶ [28]), Which is interpreted as looking up the CMIT data at the times that the each local spot is broadcasted, which is in line with admitted utility of CMI by applicant.

3.8. Applicant further argues that **"Regarding independent claim 3, this claim recites in part "determining an impression delivery for the local spots aired based on viewing data in increments of less than one hour from a national audience measurement and matching the impression delivery data with the information from the processed affidavits as a record in a database." The Examiner states that Nielsen's CMIT database contains data on a quarter hour basis and that this operation is allegedly "notoriously well known." As discussed above and in paragraphs [0011]-[0012] of the Application, the prior art has used "daypart" averages which are a broadly defined period of time such as "prime-time"- and not national viewing data "in increments of less than one hour" as recited in claim 3. " Page 13 of Remarks, 2nd paragraph**

Examiner presents that what is notoriously well known in the art is that a more dense and accurate data will produce a more accurate results. The whole

science of statistics is based on finding the right sampling population within reach and using various extrapolation techniques to arrive at a view of the larger picture. Furthermore, USPN 7,039,931 to Whymark, cited in previous office action, shows a multitude of methods to measure and track various media parameters at very granular levels (Abstract, Col 2, lines 37- 64, Col. 23 lines 33-42). Whymark is one of many inventions where the actual airing of programs are detected and used in pricing, selling, and auditing of actual viewing of programs. This is a confirmation of the motivation in the market place for ever more accurate accounting of not only aired but actually viewed programs. It is for this reasoning that it would have been obvious to move from a "daypart" type data to quarter hour, as evidenced by the availability of CMIT in quarter hour increments from Nielsen.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4.1. Claim(s) 1-7 and 9-11 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory “process” under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing (Reference the May 15, 2008 memorandum issued by Deputy Commissioner for Patent Examining Policy, John J. Love, titled “Clarification of ‘Processes’ under 35 U.S.C. 101”). The instant claims neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process. For example, the steps recited in claim 1 define a manual process of selecting several values from a database. A database lookup may be a manual look up of a book containing data, recording said numbers, and then manually and/or mentally performing several operations, without involvement of a machine.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-7 and 9-11 rejected under 35 U.S.C. 103 (a) as being unpatentable over applicant's own disclosures (background of the invention), in view of Cable Scope's Media Math based on 2000 Nielsen Media Research (hereinafter "MediaMath").

6.1. Regarding claim 1, applicant's admitted prior art discloses: **A method of calculating performance related to a local delivery of a local television commercial spot advertiser by aggregating local spots broadcast on a network into national equivalent units using a database comprising national measurement data including at least the total number of households that subscribe to the network and the total number of persons within a specific sex-age demographic group that subscribe to the network (¶ [9] - [11], and what is notoriously well known in the art such as Nielsen Ratings) the method comprising the steps of:**

assigning audience values for one or more local spots by determining a household universe for the data comprising the total number of households that subscribe to the network and storing the household

universe in the database (this is equivalent to what Nielsen calls the House Hold Universe)

determining a demo universe for the network from the data comprising the total number of persons within a specific sex-age demographic group that subscribe to the network (this is the population sample that Nielsen meters to arrive at ratings);

calculating a demo universe factor by dividing the demo universe by the household universe (this is equivalent to Nielsen's ratings);

retrieving a specific household universe for at least that part of the network corresponding to the location in which a spot was broadcast from the database and storing the specific household universe in a record corresponding to a specific local spot in the database for later retrieval (this is a local spot population, a subset of global House Hold Population);

calculating a universe conformance factor by dividing the household zone universe by the household network universe (this is a projection factor, well known in statistics fro extrapolating data from one set of data to arrive at another set);

calculating household delivery for a specific spot by multiplying the network household delivery and the universe conformance facto and storing the household delivery data in the database (part of extrapolation technique);

calculating the spot's demo delivery by multiplying the network demo delivery by the universe conformance factor and storing the demo delivery number in the database (part of extrapolation technique); repeating these steps in total for each additional local spot; and aggregating the local spots and their corresponding household delivery, demo delivery data to obtain national equivalent units (repeating and reiterating the well known steps outlined above)

Claim 1; exhaustively list the elements and steps of equations, in the tradition of Nielsen Media Research Ratings, as disclosed in MediaMath. Samplings of Nielsen's Ratings calculations, as presented in Pages 1 and 2 (Col. 3) of MeidaMath, are presented here for reference:

Rating % (Average Audience) $\text{Rating \%} = \frac{\text{Number of Households Receiving Broadcast}}{\text{Number of Households in Universe}} \times 100$	Households Using Television (HUT) $\text{HUT} = \frac{\text{Number of Households Receiving Broadcast}}{\text{Number of Households in Universe}} \times 100$	Persons Using Television (PUT) $\text{PUT} = \frac{\text{Number of Persons Receiving Broadcast}}{\text{Number of Households in Universe}} \times 100$
Audience (of Audience) $\text{Audience} = \frac{\text{Number of Households Receiving Broadcast}}{\text{Number of Households in Universe}} \times 100$	Average Audience Frequency (AAF) $\text{AAF} = \frac{\text{Number of Broadcasts} \times \text{HUT}}{100}$	Average Per Viewing Household (APH) $\text{APH} = \frac{\text{Number of Broadcasts} \times \text{PUT}}{100}$
Cost per Rating Point (CRP) $\text{CRP} = \frac{\text{Number of Broadcasts} \times \text{PUT}}{100}$	Cost per Household (CPH) $\text{CPH} = \frac{\text{Number of Broadcasts} \times \text{PUT}}{100}$	Census/Crossroads Average Rating % $\text{Census/Crossroads Average Rating \%} = \frac{\text{Number of Broadcasts} \times \text{PUT}}{100}$

Furthermore, It was known at the time of the invention that merely providing an automatic means to replace a manual activity which accomplishes the same result is not sufficient to distinguish over the prior art, *In re Venner*, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958). For example, simply automating the step of calculating the audience measurement data for each airing of the local spot based upon the information from the affidavits and NTI gives you just what you would expect from the manual step as shown. In other words there is no enhancement found in the claimed step. The claimed steps only provide automating the manual activity.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to automate the scoring and iterating steps because this would speed up the process of calculating the audience measurement data, which is purely known, and an expected result from automation of what is known in the art.

6.2. Regarding claim 2, applicant's admitted prior art discloses: **A method of aggregating local spots on a network into national equivalent units (¶ [11]) comprising the steps of:**

obtaining, in electronic format, details on a database comprising data correlated to the airing of the local spots (¶ [9] and a sentence in ¶ [25] admits availability of such correlations in form of affidavits in electronic forms);

obtaining national viewing data for the network in increments of less than one hour corresponding to each time the local spot aired and uploading said data into said database (Nielsen's CMIT, as admitted in ¶ [28]);

determining household impression and demo_impression for the local spots based on the national viewing data (¶ [11], also Nielsen's ratings);

assigning audience values for the local spots based on the impression delivery for the spots (extrapolation technique well known in the art, also same as Nielsen's methodology of arriving at Cost Per rating Point, as shown in discussion of claim 1);

sorting the database by one or more of advertiser, length of spot; network; daypart, and ISCI Code (ISCI codes are known and used for tracking and auditing of advertising spots, as also shown by Whymark; sorting of databases to view or sift through granular data, for selection of particular point, is well known in the art) ;

removing all spots that ran outside a contracted daypart;

The following steps, further exhaustively cite elements of equations expressing methodologies well known in the art for extrapolating data from one population to another. This is very much the same as what is already admitted by

the applicant, in the back ground of the invention, as prior art. Nielsen Ratings, as discussed in claim 1 is based on the same methodology.

obtaining a total number of national equivalent spots and an impression delivery for those spots, the impression delivery comprising one or more of: a total household delivery; an average household delivery per spot; an average household rating, a total demo delivery; an average demo delivery per spot; and an average demo rating;

calculating a subtotal of impression delivery by one or more of ISCI code, daypart, length, and network;

calculating a total number of national equivalent units by adding household zone universe data for each of a plurality of local spots stored in the database and dividing that number by the total number of subscribers claimed for that network;

calculating an average household delivery per spot by dividing the total household delivery by the total number of network equivalent spots;

calculating an average household rating by dividing the average household delivery per spot by the total number of claimed subscribers and then multiplying that number by 100;

calculating a total demo delivery by adding all of the demo delivery numbers for the local spots from the database;

calculating an average demo delivery by dividing the total demo delivery_ by the total number of network equivalent spots;
calculating an average demo rating by determining the average demo delivery expressed as a percentage of the total number of claimed subscribers, multiplied by a demo universe factor; and

as to

repeating the steps for additional spots_and aggregating the audience values to create a national equivalent unit on the network, It was known at the time of the invention that merely providing an automatic means to replace a manual activity which accomplishes the same result is not sufficient to distinguish over the prior art, *In re Venner*, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958). For example, simply automating the step of calculating the audience measurement data for each airing of the local spot based upon the information from the affidavits, NTI, and CMIT gives you just what you would expect from the manual step as shown. In other words there is no enhancement found in the claimed step. The claimed steps only provide automating the manual activity.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to automate the scoring and iterating steps because this would speed up the process of calculating the audience measurement data, which is purely known, and an expected result from automation of what is known in the art.

6.3. Regarding claim 3, applicant's admitted prior art discloses:

A method for aggregating local commercial spot inventory into national equivalent units for a network and providing accurate audience delivery measurements using published national viewing data comprising the steps of:

processing affidavits in an electronic format for every local spot aired, the affidavits comprising detailed information on the airing of the local spots (¶ [9], the use of affidavits in this venue, as admitted by applicant, is notoriously well known in the art);

determining an impression delivery for the local spots aired based on viewing data in increments of less than one hour from a national audience measurement and matching the impression delivery data with the information from the processed affidavits as a record in a database (¶ [8], Nielsen's CMIT database contains data on a day by day, quarter hour basis, as also admitted by applicant. Determining impression delivery for a particular program and demographic group is notoriously well known through Nielsen's Ratings and Share of audience calculations);

assigning audience values for the local spots based on the impression delivery (¶ [11]);

aggregating values calculated using the local spot affidavit information, impression delivery and audience values to generate a national equivalent unit (¶ [11]); for the national equivalent unit determining the number of times the unit aired and an impression delivery for the unit (¶ [11]);

comparing an estimated delivery derived from data in the database with the actual delivery to determine the value of the national equivalent unit (¶ [8]);

The following steps are iteration of the above steps:

for additional national equivalent units, repeating the steps of determining an impression delivery of the local spots, of assigning audience values for the local spots, and of determining the number of national equivalent units aired and the impression delivery for the national equivalent units; and

calculating from the national equivalent units the amount to charge an advertiser for an advertising schedule on the network.

Applicant's admitted prior art does not expressly show automating steps of claim 1.

It was known at the time of the invention that merely providing an automatic means to replace a manual activity which accomplishes the same result is not sufficient to distinguish over the prior art, *In re Venner*, 262 F.2d 91, 95, 120

USPQ 193, 194 (CCPA 1958). For example, simply automating the step of calculating the audience measurement data for each airing of the local spot based upon the information from the affidavits , NTI, and CMIT gives you just what you would expect from the manual step as shown. In other words there is no enhancement found in the claimed step. The claimed steps only provide automating the manual activity.

It would have been obvious to a person of ordinary skill in the art at the time of invention to automate the scoring and iterating steps because this would speed up the process of calculating the audience measurement data, which is purely known, and an expected result from automation of what is known in the art.

6.3.1. Regarding claim 4, applicant's prior art disclosure admits **wherein the affidavits comprise the exact date and time the local spot aired, the network on which the local spot aired, and the program during which the local spot aired (¶ [9]).**

6.3.2. Regarding claim 5, applicant's prior art disclosure admits **wherein the affidavits are received in electronic format** (admission is offered in a sentence in ¶ [25]).

6.3.3. Regarding claim 6, **wherein the electronic formats of the affidavits are converted into a readable format**, is merely an automation of a known process which would speed up an already expected result.

6.3.4. Regarding claim 7, applicant's prior art disclosure admits **wherein the affidavits are received in paper format and are scanned or otherwise converted into readable electronic format** (¶[9], as admitted by applicant, in a sentence in ¶[25], affidavits are available in electronic forms. Converting paper copies through technologies such as OCR is notoriously well known in the art. This is merely an automation of a known process which would speed up an already expected result).

6.3.5. Claim 9 is rejected by the same analysis as offered for claims 5 and 7.

6.3.6. Claims 10 and 11 are rejected based on the same analysis as claim 3.

Contacts

Any inquiry concerning this communication or earlier communications from the examiner should be directed to 3 whose telephone number is (571)270-1843. The examiner can normally be reached on 8:00 AM- 5:00 PM M-F, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John W. Miller/
Supervisory Patent Examiner, Art Unit 2421

/James R. Marandi/
Examiner, Art Unit 2421